

Application Serial No. 10/631,877
Reply to Office Action of August 23, 2007

PATENT
Docket: CU-3620

Amendments to the Claims

The listing of claims presented below replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1-4. (withdrawn)

5-10. (cancelled)

11. (currently amended) A mold comprising:

a front part having a front profile;

a back part having a back profile; and

a plurality of middle parts, each middle part having a middle profile;

wherein at least one of the front and back parts moves relative to one another between an open position and a closed position,

wherein the plurality of middle parts is disposed between the front and back parts in the closed position,

wherein each middle part is turnable about a separate axis,

wherein the front part and the middle parts are alignable together to form a plurality of first perimeters defining a corresponding plurality of first cavities substantially bounded by the front profile and the middle profiles when the front part and the middle parts are aligned together in the closed position whereby a plurality of sub-unit molded products can be formed in the plurality of first cavities by filling the first cavities with a substrate in which each sub-unit molded product comprising a first shape having a front complementary profile and a middle complementary profile,

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wherein the front part and the middle parts are separable from each other after
said plurality of sub-unit molded products have been formed, and

wherein the back part and the middle parts are alignable together when the plurality of sub-unit molded products are still attached to the middle parts to form a plurality of second perimeters defining a corresponding plurality of second cavities substantially bounded by a plurality of front complementary profiles in each of the sub-unit molded products when still attached to the middle parts and bounded by the back profile when the middle parts and the back part are aligned together in the closed position whereby, a plurality of assembled objects can be formed by filling the second cavities with a substance that mates with the previously formed sub-unit molded products, in which each assembled object comprising a second shape having the front complementary profile and a back complementary profile.

12. (previously presented) The mold according to Claim 11 wherein each middle part rotates approximately 180 degrees between molding cycles.

13. (previously presented) The mold according to Claim 11 wherein the rotation axis of each middle part is perpendicular to the relative movement direction between the front and back parts.

14. (previously presented) The mold according to Claim 11 wherein each middle part having several back profiles.

15. (previously presented) The mold according to Claim 11 wherein each middle part having an insulating plate wherein each middle part is thermally insulated.

16. (previously presented) The mold according to Claim 11 wherein the front part has several front profiles.

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17. (previously presented) The mold according to Claim 11 wherein the back part has several back profiles.
18. (previously presented) The mold according to Claim 11 further comprising an ejector in each middle part.
19. (previously presented) The mold according to Claim 18 wherein the ejector includes a ball screw mechanism.
20. (previously presented) The mold according to Claim 11 further comprising at least one hold-down to retain each sub-unit molded product to each middle part during a molding cycle.
21. (previously presented) The mold according to Claim 11 wherein the substrate is selected from the group consisting of a thermoplastic material, an elastomer, a silicon plastic, and a metal.
22. (previously presented) The mold according to Claim 11 wherein the substance is selected from the group consisting of a thermoplastic material, an elastomer, a silicon plastic, and a metal.
23. (previously presented) The mold according to Claim 11 wherein the substrate comprises a metal and the substance comprises a plastic material.